

Prince Edward County, July 14, 1929; Rainy River District, July 22, 1924 (J. F. Brimley).

Perhaps the easiest character for differentiating this species when mixed with *carolinus* material is the lobular form of the basal portion of the piceous pronotal maculation. *Neglectus*, which also has the basal portion of the pronotal maculation interrupted, differs in the pale part entering only on the median line whereas this species, while some of the testaceous may interrupt the base at the center, always has the lateral portion interrupted. Rarely, paler *carolinus* specimens may show a breaking up of the basal portion of the pronotal maculation, but there is not the definite lobe which we find in this species. This pronotal character, if supported by the more slender form, slender antennæ and tarsi, more divaricate ungual teeth, and large eyes, makes identification simple, even without the aid of genitalic dissections.

DESCRIPTIONS OF TWO NEW SPECIES OF WATER
BEETLES OF THE GENUS HYDROPORUS
FROM CALIFORNIA¹
(Coleoptera, Dytiscidæ)

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***Hydroporus rossi* Leech, new species**

A dark species belonging to the *vilis* group of Fall's "A Revision of the North American species of *Hydroporus* and *Agaporus*" (1923); last abdominal sternite of female produced at apex.

Female. Length 3.66 mm., width 2.01 mm. Form rather broadly ovate, only slightly convex; dorsal surface finely alutaceous, ventral more shining. Head piceous; pronotum piceous, narrowly paler along lateral margins; elytra dark reddish-brown, narrowly piceous along suture and lateral margins; metasternum and metacoxal plates piceous, abdominal sternites dark reddish-brown; first four antennal segments, legs, and tip of last sternite reddish-brown, outer antennal segments tinged with piceous.

Head two-thirds as wide as pronotum, surface finely alutaceous, finely sparsely punctate. *Pronotum* widest at base, basal margin bisinuate; surface finely reticulate, finely sparsely punctate, punctures twice as large as those of head, an anterior transverse series

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coarser and closer; lateral marginal bead two-thirds as wide as terminal antennal segment. *Elytra* finely reticulate, finely sparsely punctate, especially at sides; punctures a little coarser than those of pronotum, separated by several times their own widths. *Metacoxal* plates finely alutaceous, more finely sparsely punctate than pronotum; metasternal wings and first two abdominal sternites laterally slightly more coarsely punctate than elytra; last abdominal sternite a little produced at apex. First three protarsal segments two-thirds width of protibia, claws simple.

Male. Very similar to female. Last abdominal sternite not produced at apex; pro- and mesotarsi a little wider; anterior protarsal claws slightly thicker and more bent than their fellows. Male genitalia: see figures 1-3.

Holotype, female, No. 4976, and allotype, male, No. 4977, Calif. Acad. Sci., Ent., Pigmy Forest, Fort Bragg, Mendocino County, California, May 5, 1938, E. S. Ross, collector.

Paratypes, eleven females, four males, all same data as holotype. Distributed as follows: one pair, Canadian National Collection; one female each to the British Museum (Nat. Hist.), United States National Museum, Museum of Comparative Zoology, and Mr. J. B. Wallis; the remainder in my collection. The smallest paratype, a female, is 3.30 mm. in length; the series is remarkably uniform in punctuation; several specimens are teneral, and hence their elytra and abdominal sternites are paler in color.

Hydroporus rossi is most closely allied to *pacificus* Fall, to which species the females run in his key. *H. pacificus* is smaller (2.6—3 mm.), more coarsely punctate, much less broadly ovate, paler in color, and occurs in Alaska and British Columbia.

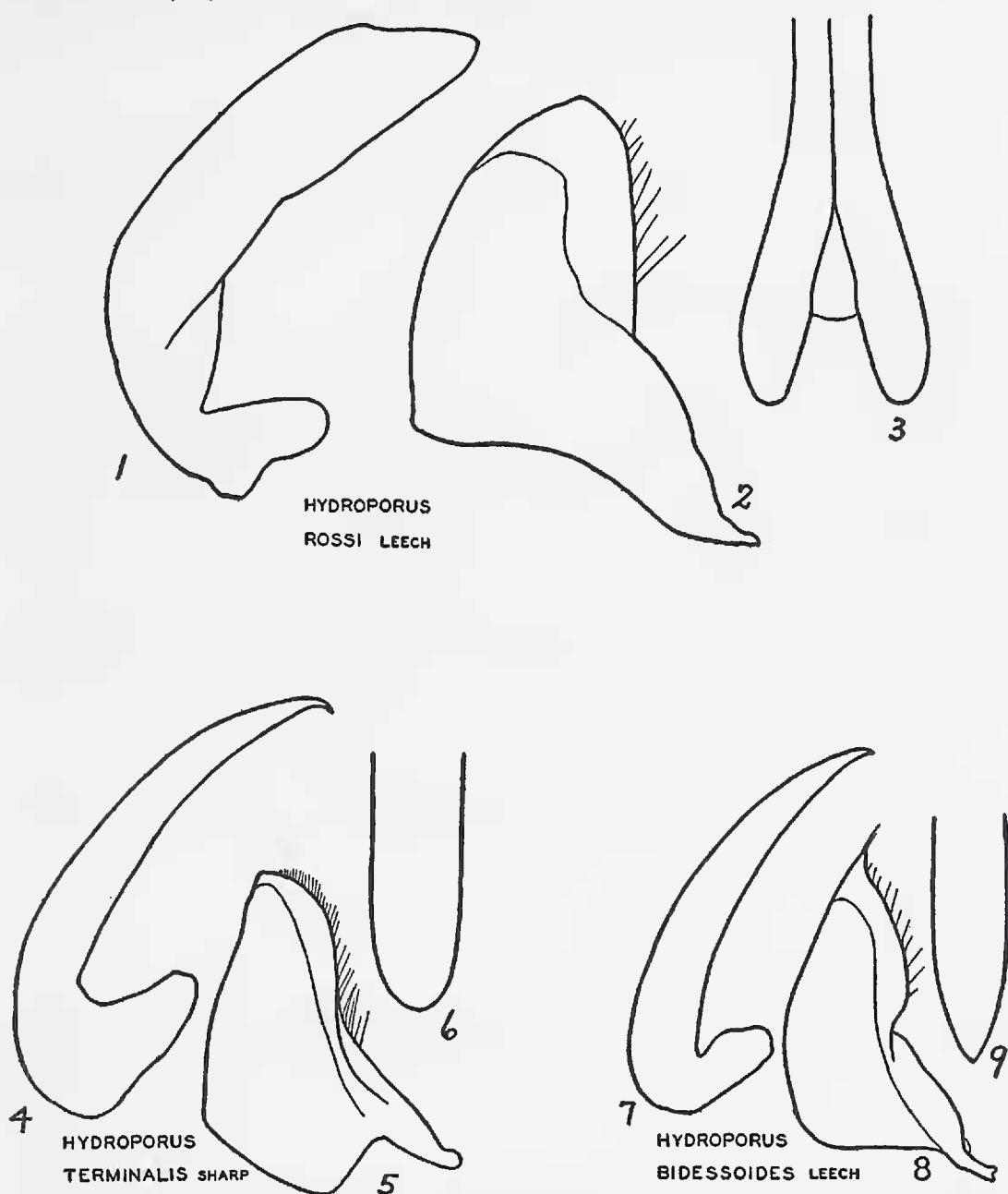
In describing the produced apex of the last abdominal sternite in *pacificus*, Fall remarked that he had not determined the sex of the three specimens before him, and that the character might possibly be sexual. I have at hand a series of *pacificus* from British Columbia, several examples of which were verified by the late Dr. Fall. It is quite easy to show, by dissection, that all specimens having the last ventral produced are females.

Hydroporus bidessoides Leech, new species

A small dark brown species, with coarsely punctate elytra; resembles a large *Bidessus*, at first glance.

Male. Length 2.22 mm., width 1.11 mm. Form rather evenly oval, narrower posteriorly than anteriorly; moderately convex, finely alutaceous dorsally, more shining ventrally. Head dark red-

dish-brown, anterior margin narrowly paler; pronotum reddish-brown, lateral marginal bead paler; elytra dark reddish-brown, vaguely paler laterally. Legs and first four antennal segments pale reddish-brown, outer seven antennal segments piceous. Body beneath black, epipleura and metacoxal processes reddish.



Figs. 1-3, male genitalia of *Hydroporus rossi* Leech: 1. Profile of aedeagus; 2. Paramere, lateral view; 3. Apex of aedeagus, dorsal view. Figs. 4-6, *Hydroporus terminalis* Sharp, same. Figs. 7-9, *Hydroporus bidessoides*, Leech, same.

Head slightly more than two-thirds width of pronotum, reticulate, finely sparsely punctate. *Pronotum* widest at base, one-third broader than long, surface reticulate, finely sparsely punctate, except for anterior and posterior transverse series of coarser punctures; lateral marginal beads broad, as wide as outer antennal segments; basal line of pronotum not sinuate between hind angles and median prolongation. *Elytra* more finely reticulate than head or pronotum, coarsely punctate, the punctures separated by from one to three times their own diameters; a few finer punctures inter-

mixed. *Metacoxal* plates reticulated, punctures about as coarse as those of elytra; abdominal sternites more shining, sparsely punctate; apical sternite slightly flattened medially. Male genitalia: see figures 7-9. First three segments of pro- and mesotarsi moderately dilated, tarsal claws simple.

Female. Very similar to male, but darker; pro- and mesotarsi narrower. Length 2.25 mm., width 1.14 mm.

Holotype, male, No. 4978, allotype, female, No. 4979, Calif. Acad. Sci., Ent., Caspar, Mendocino County, California, December 16, 1939, J. R. Helfer, collector.

Paratypes, twenty-two males, twenty-seven females, same data as holotype. One female, Caspar, Mendocino County, California, January 20, 1936 (J. R. Helfer). All specimens were taken in a small pool. The paratypes vary in length from 2.19 to 2.40 mm.; the elytral punctation is finer in some specimens, than in the type. Paratypes will be distributed as follows: four males, four females to Mr. J. R. Helfer of Caspar, California; one pair each to: the Canadian National Collection, the British Museum (Nat. Hist.), the United States National Museum, the Museum of Comparative Zoology, and Messrs. J. B. Wallis, F. N. Young and Ralph Hopping; the remainder in my collection.

In addition to the above types, four males and three females are before me; they are too damaged or too teneral to be designated as paratypes.

Hydroporus bidessoides is most closely allied to *H. terminalis* Sharp, to which it runs in Fall's key. I have a good series of Californian *terminalis* including two homeotypes compared by Mr. J. Balfour-Browne of the British Museum; as contrasted with *bidessoides*, Sharp's species is larger (2.55—2.88 mm.), more finely punctate, more attenuated posteriorly, flatter, and has slightly narrower lateral pronotal margins; in addition the median lobe of the male genitalia is differently shaped—compare figures 6 and 9.

The ædeagi of the species of Fall's *vilis* group of *Hydroporus* are very distinctive: all known to me are bifid apically, a character which I have not observed elsewhere in the genus, and which may well be definitive of the group. If this latter supposition is correct, then *terminalis* and *bidessoides* will have to be removed from this assemblage, for the ædeagus is simple in both species. However, I have not as yet observed an external character upon which to make this separation; the species *barbaræ* Fall and *browni* Wallis recently described as allied to *terminalis*, are unknown to me in nature.